

# 1997 Steam Engineer and Boiler Fireman License Law

Effective August 16, 1997

## SMC CHAPTER 6.230 STEAM ENGINEERS AND BOILER FIREMEN

### SMC 6.230.010 Scope.

The regulation and licensing of steam engineers and boiler firemen in this chapter and the regulations relating to the operation of boilers and steam engines as defined in this chapter provide the means for ensuring safe operation of such boilers and steam engines.

### SMC 6.230.020 Application of other provisions.

The licenses provided for in this chapter are subject to the general provisions of the new Seattle license code set forth in Chapter 6.202 as now or hereafter amended. In the event of a conflict between the provisions of Chapter 6.202 and this chapter, the provisions of this chapter shall control.

### SMC 6.230.030 Definitions.

Words and phrases used in this chapter relating to the regulation and licensing of steam engineers and boiler firemen shall have the following meanings:

**"Automatic boiler"** means a boiler equipped with certain controls and limit devices as required by the Boiler Code.

**"Boiler"** means a closed vessel used for heating water or other liquid or for generating steam or vapor by direct application of heat from combustible fuels or electricity.

**"Boiler Code"** is the Seattle Boiler and Pressure Vessel Code (Title 22 Subtitle IVA of the Seattle Municipal Code) as now or hereafter amended.

**"Boiler plant"** means one or more boilers and connecting piping and vessels within the same premises.

**"Boiler supervisor"** means a steam engineer Grade I, II or III who has passed additional examinations as required by the Department pursuant to the provisions of this chapter.

**"BHP"** means brake horsepower.

**"City Boiler Inspector"** means a City of Seattle Boiler/Pressure Systems Inspector employed by the Department.

**"Department"** means the Department of Construction and Land Use.

**"Director"** means the Director of the Department of Construction and Land Use.

**"Hoist and portable boiler"** means a boiler used to provide steam for the operation of various types of equipment such as floating cranes, piledrivers and other similar types of equipment used in the construction industry.

**"Hot-water supply boiler"** is a boiler having a volume exceeding 120 gallons, or a heat input exceeding 200,000 Btu/h or an operating temperature exceeding 250°F. or a pressure exceeding 160 psi, that provides hot water to be used externally to itself.

**"KBTUH"** means thousand Btu per hour

**"Low-pressure hot-water heating boiler"** means a boiler in which water is heated at pressures not exceeding 160 psi and temperatures not exceeding 250° F.

**"Low-pressure steam-heating boiler"** means a boiler operated at pressures not exceeding 15 psi for steam.

**"Monitored Boiler"** is an automatic boiler that meets the requirements of Section 330 of the Boiler Code and is so certified by the Department.

**"Out of service."** An boiler shall be "out of service" if it is manually shut down for inspection, maintenance, or repair, except for limited repairs and adjustments as set forth in Section 6.230.150 F.

**"Power hot-water boiler"** (high-temperature water boiler) means a boiler used for heating water or liquid to a pressure exceeding 160 psi or to a temperature exceeding 250° F.

**"Power steam boiler"** means a boiler in which steam or other vapor is generated at pressures exceeding 15 psi. For purposes of this chapter the term shall not include a small power boiler.

**"psi"** means pounds per square inch.

**"Small power boiler"** means a boiler with pressures exceeding 15 psi but not exceeding 150 psi and having less than 800,000 BTU per hour heat input.

**"Steam engine"** means all prime movers using vapors from a boiler for motive power, steam-driven compressors, and steam pumps except steam pumps and similar auxiliaries used only as appurtenances for the operation of a boiler.

**"Water heater"** means a closed vessel used for heating water by direct application of heat from combustible fuels or electricity with a nominal water-containing capacity of 120 gallons or less having a heat input not exceeding 200,000 BTU per hour and an operating temperature not exceeding 210° F.

#### **SMC 6.230.040 License required-Renewal and Expiration.**

It is unlawful to have charge of, or operate or permit anyone to have charge of, or operate, any boiler or steam engine without a license to do so issued by the Director or his or her functional predecessor under this chapter. All licenses shall expire at midnight on the thirtieth day of September of each year, and shall not be transferred or assigned. All renewals shall specify the same grade and be subject to such conditions or limitations as may be provided under the license to be renewed. Licensed persons desiring a renewal must also meet the requirements of Section 6.230.045.

Renewal of a license which has been expired for more than one year requires the holder to attend an approved refresher course as described in Section 6.230.045.

#### **6.230.045 Periodic refresher training required.**

Beginning January 1, 1998, all persons licensed by the department must attend an approved refresher course every five years. A document indicating proof of completion of the approved refresher course shall be provided to the Department.

#### **SMC 6.230.050 Exemptions from license requirements.**

A steam engineer's or boiler fireman's license shall not be required of any person in charge of, or operating, the following:

- A. Any boiler or steam engine subject to federal regulations;
- B. Any boiler not subject to reinspection by the Boiler Code;
- C. Low-pressure hot water, low-pressure steam and hot-water supply boiler plants having inputs of less than two million five hundred thousand (2,500,000) BTU per hour;
- D. Any boiler having an input of less than one hundred thousand (100,000) BTU per hour and a maximum pressure of one hundred pounds per square inch (100 psi) or less;
- E. Water heaters.

#### **SMC 6.230.060 Grades of licenses.**

A. The grades of steam engineers' and boiler firemen's licenses shall be as follows:

Grade I Boiler Supervisor ,  
 Grade II Boiler Supervisor ,  
 Grade III Boiler Supervisor,  
 Grade I Steam Engineer,  
 Grade II Steam Engineer,  
 Grade III Steam Engineer,  
 Grade IV Boiler Fireman,  
 Small Power Boiler Fireman,  
 Grade V Boiler Fireman.,

B. The minimum requirements for operation of each type and capacity of equipment are as set forth in the following table.

TABLE A (POWER BOILERS / STEAM ENGINES)		
Category	Type / Limitations <sup>4</sup>	Minimum License Required
All Boilers	Less than 100 psi and less than 100 kBtuh input	None
Electric Boilers	Less than 1.5 cubic ft and 80 psi	None
Electric Boilers	Less than 100 psi and 200 kw	Grade V Boiler Fireman on premises
All Boilers (except Small Power Boilers)	Each less than 1,000 kBtuh input, equipped per Table 320-A of the Boiler Code but not certified as Automatic. Steam boilers on same header: 2 maximum	Two hour checks by a Grade IV Boiler Fireman
Small Power Boilers	Maximum 800 kBtuh input, equipped per Table 320-A of the Boiler Code but not certified as Automatic. Steam boilers on same header: 2 maximum	Semiannual check by a Boiler Supervisor and two Fireman or a Small Power Boiler Fireman on premises

All other Small Power Boilers	Maximum 800 kBtuh input. Steam boilers on same header: 2 maximum	Small Power Boiler Fireman on premises
Boilers certified as Automatic	Maximum 20,000 kBtuh input, steam boilers on same header: 2 maximum	Two hour checks by a Grade IV Boiler Fireman
Boilers certified as Automatic	Maximum 50,000 kBtuh input, no limitation on number of boilers on same header	Two hour checks by a Grade III Steam Engineer
Boilers certified as Automatic	Maximum 300,000 kBtuh input, no limitation on number of boilers on same header	Two hour checks by a Grade II Steam Engineer
Boilers certified as Automatic	Unlimited input	Two hour checks by a Grade I Steam Engineer
Boilers certified as Monitored	Maximum 20,000 kBtuh input, steam boilers on same header: 2 maximum	Monthly checks by a Boiler Supervisor and twice
Boilers certified as Monitored	Maximum 50,000 kBtuh input, no limitations for boilers on same header	Monthly checks by a Boiler Supervisor and twice
Boilers certified as Monitored	Maximum 300,000 kBtuh input, no limitations for boilers on same header	Monthly checks by a Grade II Boiler Supervisor and twice
Boilers certified as Monitored	Unlimited input	Monthly checks by a Grade I Boiler Supervisor and twice
All other boilers	Maximum 20,000 kBtuh input, steam boilers on same header: 2 maximum	Constant attendance by a Grade IV Boiler Fireman
All other boilers	Maximum 50,000 kBtuh input, no limitations for boilers on same header	Constant attendance by a Grade III Steam Engineer
All other boilers	Maximum 300,000 kBtuh input, no limitations for boilers on same header	Constant attendance by a Grade II Steam Engineer
All other boilers	Unlimited input	Constant attendance by a Grade I Steam Engineer
Steam engines	Maximum 250 bhp	Constant attendance by a Grade III Steam Engineer
Steam engines	Maximum 1,500 bhp	Constant attendance by a Grade II Steam Engineer
Steam engines	Unlimited	Constant attendance by a Grade I Steam Engineer

TABLE B (LOW PRESSURE BOILERS)		
Category	Type / Limitations <sup>4</sup>	Minimum License Required
All boilers	Maximum input 2,500 kBtuh	No license required
Boilers certified as Automatic	Maximum input 5,000 kBtuh	Monthly checks by a Boiler Supervisor, or quarterly checks by a Grade V Boiler Fireman, or a Grade IV Boiler Fireman
Boilers certified as Automatic	Maximum input exceeds 5,000 kBtuh but does not exceed 20,000 kBtuh. Steam boilers on same header: 2 maximum	Quarterly checks by a Boiler Supervisor and twice by a Grade IV Boiler Fireman
Boilers certified as Automatic	Maximum input exceeds 20,000 kBtuh but does not exceed 50,000 kBtuh. No limitation on boilers on same header	Quarterly checks by a Boiler Supervisor and twice by a Grade III Steam Engineer
Boilers certified as Automatic	Maximum input exceeds 50,000 kBtuh but does not exceed 300,000 kBtuh. No limitation on boilers on same header	Quarterly checks by a Grade II Boiler Supervisor and twice by a Grade II Boiler Supervisor
Boilers certified as Automatic	Maximum input exceeds 300,000 kBtuh. No limitation on boilers on same header	Quarterly checks by a Grade I Boiler Supervisor and twice by a Grade I Boiler Supervisor
Boilers certified as Monitored	Maximum input exceeds 5,000 kBtuh but does not exceed 20,000 kBtuh. Steam boilers on same header: 2 maximum	Semiannual checks by a Boiler Supervisor and twice by a Grade IV Boiler Fireman
Boilers certified as Monitored	Maximum input exceeds 20,000 kBtuh but does not exceed 50,000 kBtuh. No limitation on boilers on same header	Semiannual checks by a Boiler Supervisor and twice by a Grade III Steam Engineer

Boilers certified as Monitored	Maximum input exceeds 50,000 kBtuh but does not exceed 300,000 kBtuh. No limitation on boilers on same header	Semiannual checks by a Grade II Boiler Supervisor or Steam Engineer
Boilers certified as Monitored	Maximum input exceeds 300,000 kBtuh. No limitation on boilers on same header	Semiannual checks by a Grade I Boiler Supervisor or Steam Engineer
All other boilers	Maximum input exceeds 2,500 kBtuh but does not exceed 5,000 kBtuh	Grade V Boiler Fireman on premises
All other boilers	Maximum input exceeds 5,000 kBtuh but does not exceed 20,000 kBtuh. Steam boilers on same header: 2 maximum	Constant attendance by a Grade IV Boiler Fireman
All other boilers	Maximum input exceeds 20,000 kBtuh but does not exceed 50,000 kBtuh. No limitation on boilers on same header	Constant attendance by a Grade III Steam Engineer
All other boilers	Maximum input exceeds 50,000 kBtuh but does not exceed 300,000 kBtuh. No limitation on boilers on same header	Constant attendance by a Grade II Steam Engineer
All other boilers	Maximum input exceeds 300,000 kBtuh. No limitation on boilers on same header	Constant attendance by a Grade I Steam Engineer

## Footnotes to Tables A and B:

1. A Grade V Boiler Fireman can also operate a low pressure boiler up to 5,000 kBtuh. A Grade V Boiler Fireman cannot operate steam boilers in battery
2. A Grade IV Boiler Fireman may operate a battery of not more than two steam or vapor boilers with a combined capacity no greater than 20,000 kBtuh total input; except when he/she is the head fireman on duty and under the direct (on site) supervision of a licensed steam engineer hereunder, he/she may operate a greater number of boilers, or boilers with greater capacity, for the purpose of training but not to exceed the capacity permitted by the license of such supervising engineer
3. A Small Power Boiler Fireman license shall permit the licensee to operate no more than two small power boilers subject to the limitation in Table A.
4. For license determination purposes, kBtuh or KW input ratings of a boiler shall be computed:
  - A. as equal to burner input as rated and labeled by the burner manufacturer for gas, propane and similar burners. Where actual fuel flow during burner operation at the maximum firing rate can be reliably measured, the burner input may be computed by such method.
  - B. as equal to the gallons-per-hour rating of the fuel nozzle or nozzles for oil burners
  - C. as equal to the electrical input in KW as rated and labeled by the boiler manufacturer for electric boilers
  - D. as the greater of all computed inputs in the case of multiple fuel burners
  - E. as the cumulative input, as measured in a), b), c), or d) above, for boilers in battery (connected to a common header). For boilers in battery so wired electrically such that only a single boiler can operate at a given time, the license requirement for such battery shall be determined by the most restrictive individual license requirement for any boiler in the battery.
5. A Grade V Boiler Fireman can also operate an electric boiler less than 100 psi and 200 kw. A Grade V Boiler Fireman cannot operate steam boilers in battery
6. A Grade III Steam Engineer can attend to Grade II Monitored boilers and a Grade II Steam Engineer can attend to Grade I boilers when such boilers are checked weekly by a Boiler Supervisor

## SMC 6.230.070 Issuance of licenses.

Persons desiring a license described in Section 6.230.060 shall make written application to the Department on the forms provided by the Department. Such application shall include the applicant's full name and address. Applications shall be accompanied by a receipt showing payment of the required examination fee as provided under Chapter 22.901J.

A. Applicants for a steam engineer's license, Grade I, II, or III shall show to the satisfaction of the Director one of the following:

1. That he/she has been employed at least three years in a position directly responsible for the care and operation of boilers or steam engines, or in the design or supervision of boilers, boiler systems, boiler firing and automatic control and safety systems, or under the direct supervision of a licensed steam engineer, Grade I, II or III; or
2. That he/she has at least three years of practical experience as a machinist apprentice in a steam engine works together with one year of employment in the direct care and operation of boilers and steam engines; or
3. That he/she has graduated from a recognized school of technology and has had at least one year of employment in the direct care and operation of boilers and steam engines.

Completion of a course as described in C.2 below, approved by the Department or its functional predecessor shall be the equivalent of one year of practical experience under subsections 1 or 2 above, however, each applicant will be entitled to only one such credit.

B. Any licensed Grade I, II or III steam engineer may apply for an upgrade to Boiler Supervisor, Grade I, II or III. Such applicant shall show to the satisfaction of the Director that he/she has been employed at least three years in one of the following:

1. In a position directly responsible for the care or operation of boilers or steam engines;
2. In the design or supervision of boilers, boiler systems, boiler firing, and automatic control and safety systems;
3. In the direct supervision of a licensed Grade I, II or III steam engineer.

C. Applicants for a Grade IV boiler fireman license shall show to the satisfaction of the Director one of the following:

1. One year of practical experience in the care and operation of a boiler; or
2. Completion of an in-service training course in the fundamentals of boiler operation as approved by the Department or its functional predecessor which shall include at least forty hours of classroom work together with:
  - a) eighty hours of on-site training relating to the care and operation of boilers under the direct supervision of a steam engineer with a license of Grade I, II or III; or,
  - b) forty hours of lab work at a facility approved by the Department.

D. Applicants for a Grade III Steam Engineer License limited to hoist and portable boilers shall show to the satisfaction of the Director, one of the following:

1. Three years of practical experience in the care and operation of boilers and steam engines; or
2. Completion of an in-service training course on the fundamentals of boiler operation, as approved by the Department or its functional predecessor which shall include fifty-five hours of classroom work, together with 120 hours of work relating to the care and operation of a minimum of two separately located hoist and portable boilers, under the direct supervision of a steam engineer with a license of Grade I, II or III.

E. All persons applying for a license under this chapter shall be examined by the Department according to the provisions of Section 6.230.100. Upon determination by the Department that the applicant has passed the applicable examination and is otherwise qualified under this chapter, including payment by the applicant of the license fee, the Director shall issue the license. In lieu of a qualifying technical examination, the Director may accept as evidence of meeting the applicable requirements of Section 6.230.100, a valid and current license issued by the City of Tacoma which maintains a licensing and testing program that, in the judgment of the Director, meets or exceeds City of Seattle requirements.

#### **SMC 6.230.080 Special license.**

Any person having been employed at least two (2) years as a licensed steam engineer or boiler fireman operating any boiler plant the capacity of which is enlarged or changed beyond the limits of his/her license may apply to the Department for a special license with the limits extended to apply only to such plant. The Director shall make an investigation of the changed boiler plant conditions together with such examination of the applicant as may be necessary to determine whether the applicant is qualified under the provisions of this chapter to operate such enlarged or changed boiler plant. When such investigation and examination reveal that the applicant is qualified to operate such plant in its changed condition, the Director shall certify approval of the application and issue such special license.

#### **SMC 6.230.090 Examination fees for licenses.**

The examination fee for a license described in this chapter shall be Twenty Dollars (\$20.00).

#### **SMC 6.230.100 Departmental authority.**

A. In connection with the regulation and licensing of steam engineers and boiler firemen, the Department is authorized to perform the following:

1. Provide qualifying examinations for persons applying for steam engineer or boiler fireman licenses under this chapter. Such examinations shall be practical in their character and shall relate to those matters which will fairly test the capacity, skill, experience, and habits of sobriety of each person examined to safely operate and properly care for a boiler and/or steam engine, within the scope of the license sought;
2. Provide qualifying examinations for persons applying for a boiler supervisor Grade I, II, or III license. Such examination shall be practical in character and shall relate to those matters which will fairly test the applicant's capacity, skill, experience, and habits of sobriety to safely use, operate, and maintain boilers and automatic or monitored boilers under applicable City and state regulations;
3. When approving any license under this chapter, the Director may impose stated conditions or limitations to such license restricting the licensee to the operation and maintenance of particular equipment at a stated location, or to the operation and maintenance of a certain class of boilers

or steam engines, or to specified permitted services in connection with the operation and maintenance of boilers and steam engines. Such restrictions shall be based upon the applicant's qualifications under this chapter and be reasonably related to the protection of the public in the safe operation and maintenance of boilers and steam engines.

B. The Department may require affidavits regarding an applicant's character, training, experience and record, and such other supporting credentials as may be necessary to determine his/her fitness.

C. The Department shall refuse to certify the applicant for a steam engineer's or boiler fireman's license if the result of the examination is such that the Department determines he/she has not sufficient knowledge of, and experience in, the care or operation of boilers or steam engines, or if the applicant is found to be mentally or otherwise unfit to safely operate boilers or steam engines. The action of the Department shall be final.

D. It shall be sufficient cause to refuse an original steam engineer's or boiler fireman's license, or any renewal thereof, if the applicant, through neglect or incompetency while in charge of a boiler or steam engine, has caused serious damage to property or has endangered the lives of others.

#### **SMC 6.230.110 Licenses to be posted or carried.**

Every licensed steam engineer or boiler fireman on duty shall display his/her license in a conspicuous place in the room wherein the boiler or steam engine is located, and such shall be effective only for the operation of the plant where it is displayed. If the licensee is in charge of, or is operating, a portable boiler or steam engine and the posting of his/her license is not practicable, such license shall be carried on his/her person, and on demand he/she shall exhibit same. A boiler supervisor shall display a legible copy of his/her license in the boiler room of each boiler that he/she supervises.

#### **SMC 6.230.120 Notice of place of employment.**

Every licensed steam engineer or boiler fireman shall keep the Boiler Inspector for the City informed of any change of place of employment. Notice shall be given within twenty-four (24) hours after leaving and/or accepting a position. Such notice shall be in writing, addressed to the Chief Boiler Inspector, Steam and Refrigeration Licensing, 710 Second Ave, Suite 700, Seattle, Washington 98104-1703, giving the licensee's name, number and grade of license and the name and address of the plant of last employment and of new employment.

#### **SMC 6.230.130 Reporting of defective boilers.**

A. Every licensed steam engineer or boiler fireman before operating any boiler shall first examine the boiler permit issued for such boiler or boilers to see that the permit is in force, and if the permit has expired he/she shall notify his/her employer. If the permit has been expired for more than ninety (90) days, he/she shall notify his/her employer and then the City Boiler Inspector of the date of expiration. He/she shall note the pressure allowed by the permit and shall test the operation of the boiler and its control and safety devices for proper operation.

B. Whenever the steam engineer or boiler fireman believes any part of a boiler or steam engine to be in defective or potentially unsafe condition, he/she shall report the fact to his/her employer in writing. If immediate corrective action is not taken, he/she shall report such defective or potentially unsafe conditions to the City Boiler Inspector.



C. The City Boiler Inspector shall thereupon investigate the same, and report any lack of proper care on the part of any licensed person to the employer and the Department. The Department shall record the facts on the records of the licensee.

D. The steam engineer or boiler fireman in charge of any boiler or steam engine shall report to his/her employer and to the City Boiler Inspector any damage or injury to any such boiler or steam engine under his/her charge or care which affects the safe operation of such boiler or steam engine. The boiler and any parts thereof shall not be removed or disturbed before an inspection has been made by a department inspector unless for the purpose of saving life. Failure to make such reports to his/her employer and the City Boiler Inspector shall be sufficient cause for the suspension or revocation of the license of the person in charge.

E. It shall be the duty of every licensed steam engineer and boiler fireman to report serious negligence in the care of boilers and steam engines to his/her employer and the Boiler Inspector.

#### **SMC 6.230.140 Duties of steam engineers and boiler firemen.**

A licensed steam engineer and boiler fireman shall perform the following duties in connection with his/her operation and maintenance of boilers and steam engines:

A. Test the operation of the boiler and its control and safety devices periodically on a routine basis in accordance with nationally recognized standards and/or boiler and control manufacturer's written recommendations;

B. Maintain and operate the equipment in a safe manner and according to nationally recognized standards such as those recommended by the American Society of Mechanical Engineers for boilers and as adopted by the Steam License Advisory Board. Such standards shall be filed with the City Clerk;

C. Prepare and maintain a boiler log book and record, at least daily or as otherwise required by this Chapter, such pertinent boiler readings and data as may be recommended by the boiler manufacturer, nationally recognized standards, or required by the Boiler Inspector and/or the senior license holder or other authorized person in charge of the boiler operation. The boiler logbook shall be kept on the premises at all times and be available for inspection by the City Boiler Inspector.

#### **SMC 6.230.150 Duties of boiler supervisor.**

A boiler supervisor shall perform the following duties in connection with his/her supervision of automatic and/or monitored boilers:

A. Prepare a boiler logbook with his/her name and the telephone numbers and addresses of home and business on the front cover. The boiler logbook shall be kept on the premises and be available for inspection by the City Boiler Inspector;

B. Determine the proper light-off, operating, and shutdown procedures and clearly set forth such procedures in the inside front cover of the boiler logbook. Determine proper firing rate and the set point or operating limits of all safety devices required on automatic or monitored boilers by the Boiler Code and clearly mark such set point or limits in the inside back cover of the boiler logbook;

C. Determine the list of pertinent boiler data entries to be recorded in the boiler logbook by the boiler owner or his/her designated representative and list such entries on the inside back cover.

This list shall include such items as any unusual conditions observed, including safety shutdowns, repairs required, adjustments required and/or made. All entries shall be made in the boiler logbook and shall include the signature of the person making such readings, observations, or adjustments. It shall be lawful to cross out words or sentences which should be changed or corrected but erasures shall be prohibited. The boiler supervisor's written instructions shall include the above signature requirement and the prohibition of erasures;

D. Examine each boiler and boiler logbook in accordance with the frequency of examinations required by SMC Section 6.230.160. Examination shall include the testing of all control devices required for automatic boilers by the Boiler Code and the testing of monitoring systems when used. If a boiler has an approved monitoring system as defined in Section 6.230.160:

1. The boiler supervisor shall cause signals to be sent to the monitoring station to test the reliability of the monitoring equipment and the response of the monitoring station.
2. The boiler supervisor shall report any failure of either the equipment or the response to the City Boiler Inspector within twenty-four (24) hours. Such report is to be in writing.

He/she shall, in addition, inspect and test all other controls on the boiler and shall flush the low-water cutoffs, if applicable, to assure that all control devices are in safe and proper operation. He/she shall permit continued automatic boiler operation only if his/her examination, inspection and testing indicate that the boiler is in a safe operating condition. No modification, revisions, or alterations to the boiler or its control devices shall be made except under his/her supervision. Adjustments by others without his/her supervision shall be limited to:

1. Restoring control devices to original factory operating conditions at the set point or within the operating limits determined by the boiler supervisor as set forth in the boiler logbook; or
2. Repair and/or adjustment of the burner system for viscosity changes or to correct fuel-air ratios to restore proper operation at the firing rate indicated in the boiler logbook by the boiler supervisor; or
3. Repair or adjustment of any other system not directly related to the primary safety controls or to the pressure vessel to restore such systems to proper operating conditions. Entries of such repairs or adjustments shall be made in the boiler logbook and shall include the signature of those making such repairs or adjustments;

E. Attend any startup of an automatic boiler out of service after corrective work other than limited adjustments or repairs by others as set forth in subsection D has been performed on the boiler, its firing equipment, or its control and safety devices, and remain in constant attendance until:

1. The boiler has reached its preset operating range of pressure; and
2. The primary controls and safety devices have been proved; and
3. The boiler is acceptable to him/her for continued operation.

Provided, the boiler supervisor shall not be required to be in attendance during light-off of original boiler equipment being installed by and under the control of the boiler manufacturer or his/her representative, by a boiler installation contractor or boiler or burner installer making such installation under the manufacturer's written instructions and recommendations, nor shall he/she be required to be in attendance during light-off following adjustment or authorized boiler or burner manufacturer alterations made by the above representative, contractor or installer within the

guarantee or warranty time period during which time the representative, contractor or installer is obligated to render such service; provided, however, that such representative, contractor or installer shall furnish the boiler supervisor with recommended set points or operating limits of all control devices and recommended firing rates as well as other pertinent data in writing and shall record all subsequent changes, adjustments, alterations or recommendations in the boiler logbook together with his/her signature;

F. Provide for a substitute boiler supervisor to attend to boilers in his/her charge when he/she is unable to respond to trouble calls. He/she shall list the names, home and business telephone numbers and addresses of substitute boiler supervisors on the front of the boiler logbook;

G. Respond to trouble calls in accordance with the following:

1. Make verbal contact with the licensed operator, boiler owner or his/her representative within two (2) hours of a trouble call from such person, and
2. Have the capability of being present at a boiler site within four (4) hours on a trouble call from that site.

H. Supervise a boiler or system of boilers not exceeding the limitations of his/her license however;

1. A Boiler Supervisor may not act as both Boiler Supervisor and the licensed operator except when;

a) the Boiler Supervisor is a full-time employee of the boiler owner/user or,

b) the licensed operator is unavailable due to vacation, illness or similar temporary circumstances.

#### **SMC 6.230.160 Observation and inspection of boilers.**

A. Non-automatic Boilers and Steam Engines. No engineer or boiler fireman in charge of a boiler, boiler plant, or steam engine, for the operation of which this chapter requires a license of Grade I, II, III or IV, shall leave the immediate vicinity thereof for more than twenty (20) minutes when such boiler, boiler plant, or steam engine is being operated. No steam engineer or boiler fireman, licensed under this chapter, in charge of any boiler or steam engine shall leave the premises of his/her employment when such boiler or steam engine is being operated without first either stopping the steam engine and shutting off all sources of heat in the boiler or being relieved by a person duly licensed under this chapter.

B. Definitions. Phrases used in this section shall have the following meanings:

1. "Check by boiler supervisor" means inspection of all controls and safety devices pursuant to the requirements of Section 6.230.150 D.
2. "Check by licensed operator" means physical examination of the boiler or engine to ensure proper operation and maintenance pursuant to the requirements of SMC Sections 6.230.130 and 6.230.140.
3. "Approved monitoring system" means a monitoring system manufactured, installed, and maintained in a manner approved by the Director.

4. "Twice daily check" means two inspections of a boiler that are required to be recorded in the boiler logbook by this chapter. The first check of the day shall be made not less than eight hours after the last recorded check of the previous day; the second check of the day shall be made at least six hours after the first recorded check of the day. This definition shall not preclude, in any way, additional checks being made to ensure safe operation of a boiler. Twice daily checks may not be performed by a Boiler Supervisor unless such Boiler Supervisor is a full time employee of the boiler owner.

5. "Check by a licensed operator at two hour intervals" must include an entry in the boiler log.

#### **SMC 6.230.170 Steam License Advisory Board.**

A. There shall be a Steam License Advisory Board consisting of nine (9) members appointed for four (4) year terms by the Department, except that upon making the first appointments the length of terms of the members shall be staggered so that no more than three (3) board members' terms of service expire in the same year.

B. The Steam License Advisory Board shall consist of nine (9) members, with each of the following groups of persons to be represented by three (3) from each group: persons who are, or have been, licensed as a steam engineer or boiler fireman; persons owning boilers or managing boilers for owners; and persons from the general public.

C. The Steam License Advisory Board shall advise and assist the Department in the administration of the steam engineer's and boiler fireman's license examination program, and the Department is authorized to define the duties of and prescribe the procedure for such Board. The Steam License Advisory Board may recommend to the Department such revisions to the Steam Engineer's and Boiler Fireman's Ordinance as it may deem appropriate.

#### **SMC 6.230.180 Enforcement-Filing of charges.**

A. The Director of the Department of Construction and Land Use shall enforce this chapter and in such connection is authorized to promulgate rules and regulations as may be deemed necessary to provide the means for ensuring safe and proper installation, repair, use and operation of boilers and steam engines.

B. All charges against any person licensed under the provisions of this chapter shall be filed in writing with the Department.

#### **SMC 6.230.190 Posting of regulations.**

A copy of the ordinance codified in this chapter or condensed version thereof shall be posted by the employer in every boiler and engine room where licensed operators or boiler supervisors are required.

#### **SMC 6.230.210 Unlawful interference with licensee.**

A. It is unlawful for any person to knowingly:

1. Prevent or attempt to prevent any licensee under this chapter from performing any act required to be performed by this chapter; or

2. Require or attempt to require any licensee under this chapter to perform any act prohibited by this chapter.

B. Conduct made unlawful by this section constitutes a crime subject to the provisions of Chapter 12A.02 of the Seattle Criminal Code, punishable by a fine not to exceed Five Thousand Dollars (\$5,000.00), or by imprisonment for a term not to exceed one (1) year, or by both such fine and imprisonment.

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## **ADDITIONAL INFORMATION ON THE FOLLOWING IS INCLUDED FOR GENERAL INFORMATION PURPOSES**

### **BOILER MAINTENANCE AND OPERATIONAL STANDARDS**

In accordance with provisions set forth in Section 6.230.140, B of the Seattle Municipal Code, Steam Engineer and Boiler Fireman License Law , the Seattle Steam License Advisory Board has adopted the nationally recognized standards listed below:

#### **ASME Boiler and Pressure Vessel Code:**

- Section I - Power Boilers
- Section IV - Heating Boilers
- Section VI - Suggested Rules for Care and Operation of Heating Boilers
- Section VII - - Suggested Rules for Care and Operation of Power Boilers

#### **Hartford Steam Boiler's:**

- Heating Boiler Wall Chart
- Power Boiler Wall Chart

*These publications may be seen in the Science Department of the Main Branch of the Seattle Public Library*

#### **Licensing Examinations and Information: (206) 684-5174**

[email: evelyn.dunlop@ci.seattle.wa.us](mailto:evelyn.dunlop@ci.seattle.wa.us)

#### **Chief Boiler Inspector: (206) 684-8459**

[email: don.gentry@ci.seattle.wa.us](mailto:don.gentry@ci.seattle.wa.us)

## **ADDITIONAL SEATTLE MUNICIPAL CODE EXCERPTS - FEES**

### **22.901J.060 Boiler and refrigeration licenses and examinations.**

Fees for boiler and refrigeration examination and annual license fees, payable in advance, shall be charged as set in Table 19-A.

<p style="text-align: center;">TABLE 19-A FEES FOR BOILER AND REFRIGERATION LICENSES AND EXAMINATIONS</p>
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License fees: <sup>1</sup>	
Refrigeration Contractor	
Class A	\$100.00
Class B	\$100.00
Class C	\$160.00
Air-conditioning contractor	\$100.00
Refrigeration service shop	\$ 45.00
Journeyman refrigeration mechanic	\$ 45.00
Refrigeration service shop mechanic	\$ 45.00
Industrial refrigeration engineering	\$ 45.00
Refrigeration operating engineer	\$ 45.00
Steam engineers and boiler firemen (all grades)	\$ 45.00
Boiler Supervisor, all grades	\$ 75.00
Examination fees – all licenses	\$ 20.00

Note to Table 19-A:

<sup>1</sup> When a license is issued that will expire in less than six (6) months from the date of issuance, the fee shall be one-half (½) the annual fee.